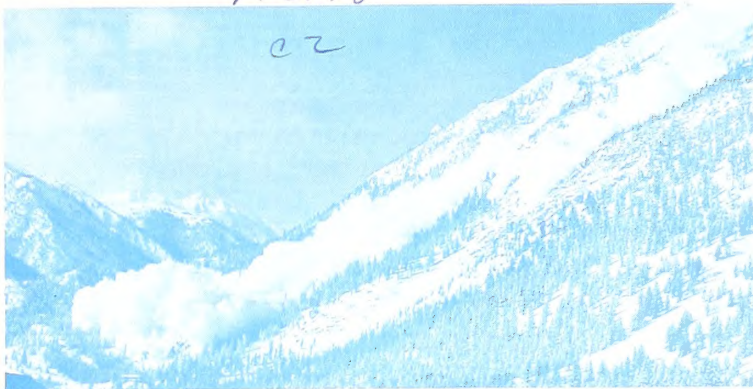


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Avalanche Notes

U.S. Forest Service
Westwide Avalanche Network

FEBRUARY 1991

February brought subnormal snows throughout the West. It was one more bitter pill for the drought-stricken Sierra of California and the Sawtooth Range of Idaho. In the Sierra, Alpine Meadows recorded but 22% of normal; Squaw Valley, 12%; and Mammoth Mtn., 5%. In the Cascades of Oregon, Mt. Hood Meadows managed only 15% of normal snows. In Washington, the weather was only slightly snowier. Mt. Rainier and Crystal Mtn. received ample rain (6.57" at Paradise-Mt. Rainier on the 19th-20th) but both got only 40% of normal snowfall. Stevens Pass recorded 24" of snow on the 20th, but finished the month with only 46% of normal.

In the Intermountain area, Sun Valley, ID received all of 1" of snow -- less than 3% of normal. In Montana, Big Sky got 51%; Big Mountain, 41%; and Bridger Bowl, 38%. In Wyoming, Teton Pass got 61% while Jackson Hole only got 31% of normal. And in Utah, Snowbird was helped by 29" on the 17th-18th and wound up with 52%.

In Colorado, the first 12 days of February were dry throughout, then light snows favored the northern third of the mountains. In the northern mountains of Colorado, Copper Mtn. got 98% of normal while all other sites recorded 62-93%; in the central mountains, Aspen Mtn. reported 98% while the other sites got 49-72%; and in the southern mountains, the range was 26-44%.

In the two extremes of the West, Taos, NM received a miserly 20% of normal while Alyeska, AK managed 64%. Let's give a big yawn to February snowfall.

Nine avalanche incidents were reported in February, resulting in 14 people caught, 6 partly buried, 1 buried, 2 injured, and 2 killed. Here's a summary of the notable events: On the 1st-4th, an avalanche cycle rippled through the Brooks Range of northern Alaska. Two pipeline workers on Atigun Pass were caught in avalanches, one while driving a truck and the other while driving a grader. The grader was mostly buried and slightly damaged.

On the 17th on Cottonwood Pass, CO, a snowmobiler was buried and killed in what was in all likelihood a natural avalanche. While three men were riding up the summer road on the east side of the pass, a cornice block on the ridge above broke loose and triggered a slab avalanche that swept one man and his machine off the road. One survivor, probing with road-marker wands and digging with helmet and windshield, located and uncovered the victim from 4 feet of snow in 45 minutes. It was too late.

On the 23rd on Mt. Washington, NH, a party of three skiers/snowboarders climbing up Tuckerman Ravine triggered an avalanche that carried all three down and also overran two other people below. All five were partly buried, and one suffered leg injuries and had to be carried out. The following day, the 24th, two ice climbers in Huntington Ravine triggered an avalanche that carried both men on a 700-foot fall down an ice gully. Neither was buried, but one suffered a broken pelvis, and the other was dead from head injuries, despite wearing a helmet.

Seasonal avalanche-accident totals through February are 61 incidents, 72 people caught, 19 partly buried, 11 buried, 6 injured, and 5 killed; 6 vehicles have been caught and 2 buildings damaged.

U.S. FOREST SERVICE
ALPINE SNOW AND AVALANCHE RESEARCH PROJECT
RM STATION FORT COLLINS, COLO.

FEBRUARY 1991

SUMMARY OF WEATHER AND SNOW CONDITIONS

AREA	SNOWFALL			WATER EQUIVALENT			SNOW DEPTH			TEMPERATURE			WIND SPEED AND DIRECTION		
	TOTAL SNOWFALL IN.	MAX IN.	DEN IN.	MAX IN.	0 IN.	1 IN.	MAX IN.	0 IN.	MIN IN.	MEAN IN.	MEAN IN.	AVG IN.	AVG FOR 6 HOURS MO.	PERIODS 15 GE	FASTEST HOUR MPH DIR.

CENTRAL AND SOUTHERN ROCKY MOUNTAINS	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
ARAPAHO BASIN, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
ASPEN HIGHLANDS, CO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
BEAR LAKE, RMNP, CO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
BEAVER CREEK, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
BRECKENRIDGE, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
COOPER MOUNTAIN, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
CRESTED BUTTE, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
GOTHIC, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
KEYSTONE, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
MINER PARK, S.A., CO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
MONARCH, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
PURGATORY, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
RED MOUNTAIN PASS, U.S. 550	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
SUNLIGHT, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
TELLURIDE, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
WAIL, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
WINTER PARK, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
WOLF CREEK, COLO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6

INTERMOUNTAIN

BIG MOUNTAIN, MONT	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
BIG SKY, MONT	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
BRIDGER, BOWL, MONT	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
JACKSON HOLE, MONT	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
PARK WEST, UTAH	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
SCHWEITZER, BASIN, ID	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
SNOWBIRD, UTAH	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
SOLITUDE, UTAH	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
SUN VALLEY, IDAHO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
TETON PASS, WYO	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6

WEST COAST

ALPINE MEADOWS, CAL	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
ALPESKA, CAL	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
CRYSTAL MTN 1, MASH	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
CRYSTAL MTN 2, MASH	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
EAGLE CREST, ALASKA	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
HEAVENLY VALLEY, CAL	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
MAMMOTH MOUNTAIN, CAL	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
MT. HOOD, ORE	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
MT. RAINIER, WASH	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
SNOQUALMIE PASS, WASH	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
SNOQUALMIE VALLEY, CALIF	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
STEVENS PASS, WASH	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6
SUGAR BOWL, CALIF	23.7	7.1	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6	7.1	0.6	0.6

-- DATA INCOMPLETE OR MISSING
M--ONE OR MORE DAYS OF RECORD MISSING--IF AVERAGE VALUE IS ENTERED, LESS THAN 10 DAYS RECORD IS MISSING
IF M IS ENTERED IN WIND SPEED COLUMN, LESS THAN 37.6-HOUR PERIODS ARE MISSING
GE--GREATER THAN OR EQUAL TO

U.S. FOREST SERVICE
ALPINE SNOW AND AVALANCHE RESEARCH PROJECT
RM STATION FORT COLLINS, COLO.

FEBRUARY 1991
AVALANCHE SUMMARY

AREA	TOTAL				DATES				NUMBER OF DAYS WITH				TYPE OF AVALANCHE				FRACTURE LINE HEIGHTS IN FEET				VERTICAL DESCENT IN FEET				AVALS ACROSS MAJOR ACCESS ROADS NO.
	A	V	A	L	S	F	I	R	S	T	A	V	A	L	S	D	A	I	N	E	GE	GE	GE	GE	
	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.	THIS MONTH NO.
CENTRAL AND SOUTHERN ROCKY MOUNTAINS																									
ARAPAHOE BASIN, COLO	11	52	32	18	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0
ASPEN HIGHLANDS, COLO	48	94	48	18	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0
ASPEN MOUNTAIN, COLO	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
ASPEN SNOWMASS, COLO	23	86	23	18	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0
BERTHOUD PASS, COLO	5	37	5	18	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0
BERTHOUD PASS, U.S. 40	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
BRECKENRIDGE, COLO	14	63	14	18	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0
CRESTED BUTTE, COLO	38	99	38	18	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0
GOTHIC, COLO	3	9	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
LOVELAND BASIN, COLO	6	18	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
LOVELAND PASS, U.S. 6	4	18	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
WINTER PARK, COLO	6	22	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
MONARCH, COLORADO	4	18	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
RED MOUNTAIN PASS, U.S. 550	4	18	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
STEAMBOAT SPRINGS, CO	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
SUNLIGHT, COLORADO	2	6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
TELLURIDE, COLO	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
UTAH MINE, COLO	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
VAIL, COLO	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
VAIL PASS, U.S. 6	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
WOLF CREEK, COLO	2	10	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
INTERMOUNTAIN																									
BIG MOUNTAIN, MONT	7	97	7	19	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	0
BIG SKY, MONT	35	156	35	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	0
BRIDGER BOWL, MONT	15	297	15	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	0
PARK WEST, UTAH	62	45	62	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	0
SOLITUDE, UTAH	140	228	140	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	0
SNOWBIRD, UTAH																									
WEST COAST																									
ALPINE MEADOWS, CAL	41	56	41	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
ALYESKA, ALASKA	33	115	33	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
CRYSTAL MTN, WASH	34	268	34	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
KIRKWOOD MDS, CAL	87	199	87	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
MT. HOOD MEADOWS	20	155	20	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SQUAW VALLEY, CALIF	117	384	117	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
STEVENS PASS, WASH	5	283	5	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0
SUGAR BOWL, CALIF	21	295	21	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0

---=DATA INCOMPLETE OR MISSING
GE=GREATER THAN OR EQUAL TO
+=ALSO OCCURRED ON OTHER DATES